Remarks

Reconsideration of this Application is respectfully requested.

Claims 1-5 and 21-25 are pending in the application, with claims 1 and 21 being the independent claims. Claims 21-25 are withdrawn. Claims 6-20 were previously canceled without prejudice to or disclaimer of the subject matter therein. Applicants reserve the right to prosecute similar or broader claims, with respect to the canceled and amended claims, in the future.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all rejections and that they be withdrawn.

Election Restriction

Claims 21-25 were withdrawn from further consideration pursuant to 37 C.F.R. 1.142(b), as allegedly being drawn to a non-elected invention, there being no allowable generic or linking claim. Applicants timely traverse the restriction (election) requirement in the reply filed on April 24, 2006.

Applicants submit that claim 1 is generic of at least one or more claims in this application. Therefore, upon allowance of claim 1, Applicants respectfully request rejoinder and allowance of claims 21-25, which claims include all the limitations of an allowable claim. *See* M.P.E.P. §821.04. Specifically, claim 21 recites the vibration isolation system of claim 1 plus some additional apparatus. Accordingly, if claim 1 is allowable, claim 21 should equally be allowable.

Rejections under 35 U.S.C. § 102

In View of Tatsuya

Claims 1-5 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Japanese Patent Application No. JP112433 to Tatsuya ("Tatsuya"). Applicants respectfully traverse this rejection.

The Office Action contends that Tatsuya teaches each of the elements of independent claim 1. Applicants respectfully disagree. Claim 1 recites a vibration isolation system for at least partially damping and isolating vibrations of a body, the system comprising:

> a plurality of active isolator devices mechanically coupled to the body; and
> a control system configured to control the active isolator devices, wherein the control system is configured to:
> decouple vibrations in modal directions;
> determine a modal compensation signal for each modal direction;
> recouple each modal compensation signal into an active isolator control signal for each active isolator device; and
> stabilize at least one unstable natural mode of the body.

Tatsuya does not disclose a "control system [that] is configured to: decouple vibrations in modal directions; determine a modal compensation signal for each modal direction; recouple each modal compensation signal into an active isolator control signal for each active isolator device; and stabilize at least one unstable natural mode of the body" as recited in Applicants' claim 1.

The Office Action equates the use of operational and control modes disclosed in Tatsuya to the modal directions and modal compensation signal of Applicants' claim 1. Applicants submit that "modal" carries a different meaning in Applicants' claim 1 than it does in Tatsuya. Although the Examiner interprets the meaning of the claim language broadly, such interpretation should be in light of the Applicants' specification. *See* M.P.E.P. § 2111

(During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." (Emphasis added)). That is, while the specification should not be read into the claims, the Examiner's broadest reasonable interpretation of the claim language must be balanced against the context of the claim terms in the specification. Further, the Applicant is allowed to be his own lexicographer. *See* M.P.E.P. § 2111.01(IV) (Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999)).

It appears that the Examiner is giving "modal" a broader interpretation than the context of the specification provides. Applicants submit that the meaning of "modal" decoupling and "modal" compensation signal is disclosed in paragraphs [0044] and [0051] of Applicants' specification as a coordinate transformation from one coordinate system (usually Cartesian coordinates) to a modal coordinate system, such that the modal coordinate system includes independent axes. Further, Applicants' specification, in paragraph [0055], incorporates by reference Subrahman *et al.*, Active Vibration Isolation Design for a Photolithographic Stepper, In Proc. 6th International Symposium on Magnetic Bearings, pp. 10-21, 1998, which describes how the actual "modal" transformation is realized. The operational "modes" and control "modes" disclosed by Tatsuya do not involve transformations of the Cartesian vibrations measurements to any form of "modal" coordinate system. Accordingly, Applicants submit that Tatsuya does not disclose a "control system [that] is configured to: decouple vibrations in modal directions; determine a modal compensation signal for each modal direction; recouple each modal compensation signal into

an active isolator control signal for each active isolator device; and stabilize at least one unstable natural mode of the body" as recited in Applicants' claim 1.

Therefore, for at least the reasons set forth above, Applicants submit that independent claim 1 is patentable over Tatsuya.

Claims 2-5, all of which depend from independent claim 1, are also patentable over Tatsuya for reasons similar to those set forth above with respect to independent claim 1, and further in view of their own respective features.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-5, and find the claims allowable over the applied reference.

In View of Masato

Claims 1-5 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Japanese Patent Application No. JP 10-275756 to Masato ("Masato"). Applicants respectfully traverse this rejection.

The Office Action contends that Masato teaches each of the elements of independent claim 1. Applicants respectfully disagree. Claim 1 recites a vibration isolation system for at least partially damping and isolating vibrations of a body, the system comprising:

> a plurality of active isolator devices mechanically coupled to the body; and
> a control system configured to control the active isolator devices, wherein the control system is configured to:
> decouple vibrations in modal directions;
> determine a modal compensation signal for each modal direction;
> recouple each modal compensation signal into an active isolator control signal for each active isolator device; and
> stabilize at least one unstable natural mode of the body.

Masato does not disclose a "control system [that] is configured to: decouple vibrations in modal directions; determine a modal compensation signal for each modal direction; recouple each modal compensation signal into an active isolator control signal for each active isolator device; and stabilize at least one unstable natural mode of the body" as recited in Applicants' claim 1.

The Office Action equates the calculation of dislocation of the main body part and conversion to dislocation of the reticle stage disclosed in Masato to the modal directions and modal compensation signal of Applicants' claim 1. As discussed above, Applicants submit that modal carries a different meaning in Applicants' claim 1 than it does in Masato. "Modal," as used in Applicants' claim 1, means a coordinate transformation from one coordinate system (usually Cartesian coordinates) to a modal coordinate system, such that the modal coordinate system includes independent axes. The calculated dislocation of the main body and re-associated reticle dislocation disclosed by Masato do not involve transformations of the Cartesian vibrations measurements to any form of "modal" coordinate system. Accordingly, Applicants submit that Masato does not disclose a "control system [that] is configured to: decouple vibrations in modal directions; determine a modal compensation signal for each modal direction; recouple each modal compensation signal into an active isolator control signal for each active isolator device; and stabilize at least one unstable natural mode of the body" as recited in Applicants' claim 1.

Therefore, for at least the reasons set forth above, Applicants submit that independent claim 1 is patentable over Masato.

Claims 2-5, all of which depend from independent claim 1, are also patentable over Masato for reasons similar to those set forth above with respect to independent claim 1, and further in view of their own respective features.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claims 1-5, and find the claims allowable over the applied reference.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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